# 1. PURPOSE OF AND NEED FOR ACTION

TVA manages public land on Norris Reservoir to generate prosperity and improve the quality of life in the Tennessee Valley. This public land, together with adjoining private land, is used for public and commercial recreation, natural resource management, and to meet a variety of other community needs. The purpose of land planning is to apply a systematic method of evaluating and identifying the most suitable use of public land under TVA stewardship. These plans seek to integrate land and water resources, provide for the optimum public benefit, and balance competing, and sometimes conflicting, resource uses. Each reservoir land management plan (Plan) is submitted for approval to the TVA Board of Directors (Board), and adopted as agency policy to provide for long-term land stewardship and accomplishment of TVA responsibilities under the 1933 TVA Act.

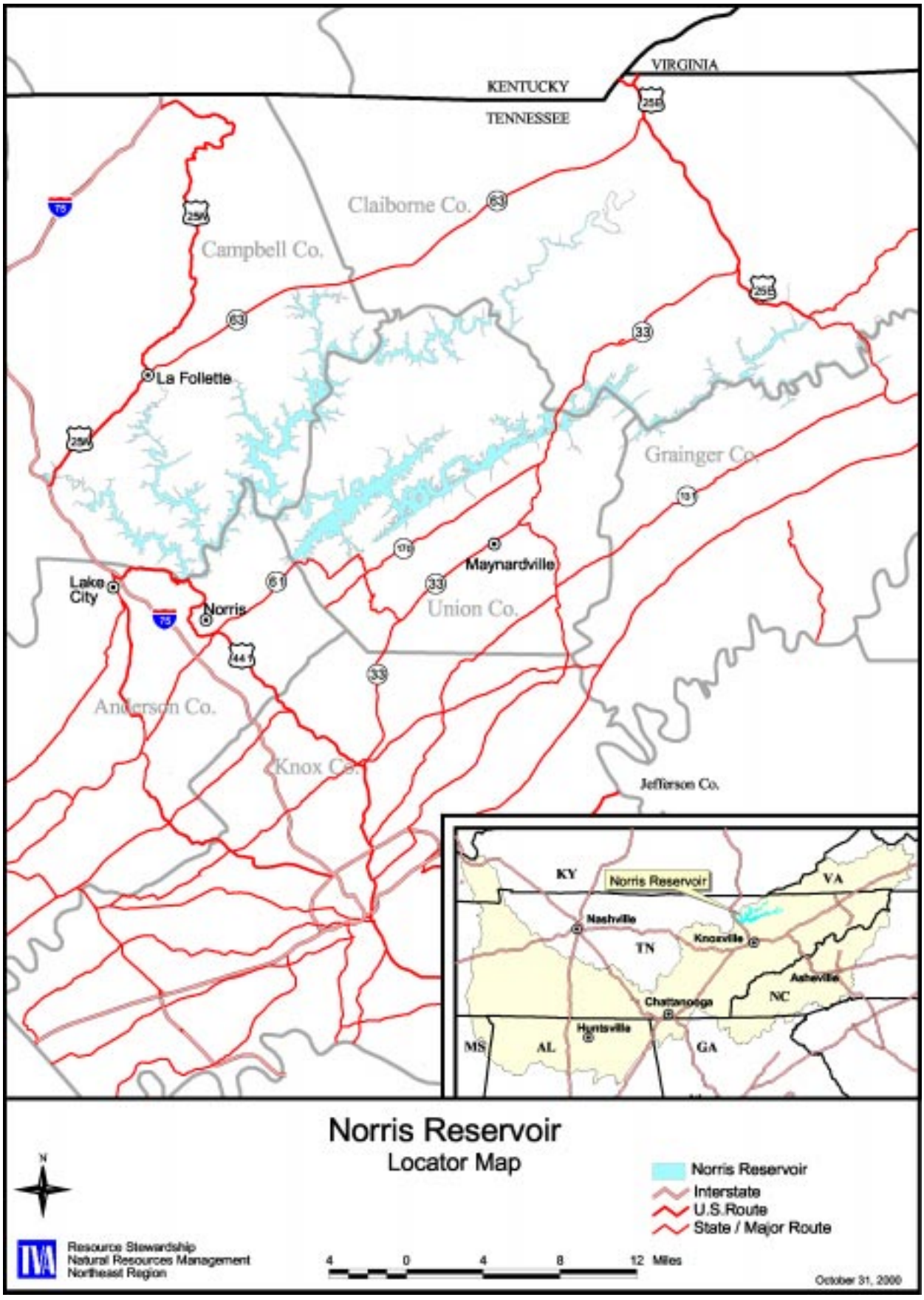
Reservoir land management plans have been completed and implemented for seven mainstream and five tributary reservoirs. Older plans are being updated for selected mainstream reservoirs. Currently, Norris Reservoir is managed using a Forecast System developed in 1968. The purpose of this Environmental Assessment (EA) is to examine the impacts of a proposed Plan for alternative uses of TVA's land on Norris Reservoir and to involve the public in decisions regarding the allocation of TVA public land on Norris Reservoir.

## 1.1 Background

The Clinch River Basin offered excellent opportunities for construction of a large storage project, and as early as 1911 the present site for Norris Dam was investigated by power company interests. These studies recommended a number of dam sites, among them one on the Clinch River at approximately the present location of Norris Dam, then known as the Cove Creek site. As early as 1922 the outstanding importance of the Cove Creek Dam as a flood-control measure was emphasized, particularly by Nebraska Senator George Norris. Senator Norris also recognized the importance of such projects in hydroelectric generation and navigation development.

The history of the Norris Project was inextricably connected with that of the Muscle Shoals development in Alabama. The importance of navigation on the Tennessee River had been recognized for more than a century. At the time of the creation of TVA, several reservoirs existed in the Tennessee Valley upstream of Wilson Dam. Tennessee Electric Company operated Hales Bar Dam and Powerhouse on the Tennessee River and a three-dam development on the Ocoee-Toccoa River. The Aluminum Company of America had constructed three dams on the Little Tennessee River system and was planning others. In 1930 Carolina Power Company had completed the Waterville Project on the Big Pigeon River, a tributary of the French Broad River. Numerous smaller water-power projects had been completed, and several preliminary power studies had been conducted by private interests on the possibility of hydroelectric development of the French Broad, Holston, and Clinch Rivers (TVA, 1940).

**Figure 1-1 Vicinity Map of Norris Reservoir**



TVA created its first dam, the 1,860-foot-long, 265-foot-high Norris Dam at Clinch River mile (CRM) 79.8. Named for Senator George Norris, construction of Norris Dam and Reservoir began in 1933 and was completed in 1936. Located in the Tennessee counties of Anderson, Campbell, Union, Claiborne, and Grainger (see Figure 1.1-1), Norris Reservoir has the largest flood control storage capacity of any reservoir on a tributary of the Tennessee River. Nearby towns and communities include Clinton, Norris, Andersonville, Caryville, Jacksboro, LaFollette, Lake City, Harrogate, and Tazewell.

Norris Reservoir extends 129 miles upstream from the dam site (73 miles up the Clinch River and 56 miles up the Powell River) and covers 34,200 surface acres at normal maximum (summer) pool elevation of 1020-foot mean sea level (msl). The top of the gates, maximum shoreline contour (msc), is 1034-foot msl, while the normal minimum pool (winter) elevation is 960-foot msl. On Norris Reservoir, typical annual water level fluctuation is 42 feet and ranges from elevation 978- to 1020-foot msl. It has 809.2 miles of mainland and island shoreline and collects rainfall runoff from a 2,912-square-mile watershed from portions of east Tennessee and southwest Virginia. This watershed accounts for roughly 7 percent on the entire Tennessee River drainage basin.

Norris Dam and Reservoir form an integral unit in the overall system of water control projects in the Tennessee Valley that aids in reducing main river flood stages and in stabilizing low water flows. As a multipurpose project, it also provides power production, navigation, recreation opportunities, and residential, as well as regional economic development. As an example of its navigation benefit, immediately after its completion, substantial releases from Norris Reservoir during periods of low water on the lower river added two feet to the controlled depth of the 250-mile reach of the river between Wilson Dam and the mouth of the Tennessee River (TVA, 1940).

Originally, TVA acquired 122,000 acres of land around Norris Reservoir. TVA later sold 56,700 acres and transferred or leased an additional 35,000 acres to the state of Tennessee and various counties for recreation developments (including Norris Dam, Cove Lake, and Big Ridge State Parks). TVA also acquired the right to flood (flowage easement rights) over 4,000 acres of privately-held land to allow flexibility of reservoir operations. The agency retained landrights below elevation 1044 (and in some cases below elevation 1052). Subsequent transfers of land for economic, industrial, residential, or public recreation development have resulted in a current net balance of 27,926.8 acres (in fee simple ownership) of public land on Norris Reservoir. Forests occupy the majority of the land, and some 85 percent of the TVA-managed shoreline remains undeveloped.

## 1.2 Other Pertinent Environmental Reviews or Documentation

*Tennessee River and Reservoir System Operation and Planning Review (TVA, 1990)*. In December 1990 TVA completed an Environmental Impact Statement (EIS) addressing changes to the operation of its reservoir system, with emphasis on water quality and lake levels. In this EIS, TVA also addressed the environmental and socioeconomic consequences of changes in reservoir operations on land and shoreline development. Following completion

of the review, TVA delayed the late summer draw-down of tributary reservoirs until August 1. It also began a system-wide program, now nearing completion, to improve water quality below dams.

*Agricultural Land Licensing for 1999-2003 Crop Years - Northeast Region, Land Management - Boone, Cherokee, Douglas, Norris, and South Holston Reservoirs and the Clinchport River Access Site in Anderson, Campbell, Claiborne, Grainger, Hamblen, Hawkins, Jefferson, Sevier, Sullivan, Union, and Washington Counties, Tennessee and Scott and Washington Counties, Virginia (TVA, 1999).* In January 1999 TVA completed an Environmental Assessment (EA) on the licensing of TVA public land in the northeast region for agricultural use. TVA proposed to license 72 tracts totaling 1,039 acres for a 5-year cycle. The EA evaluated the potential environmental impacts of issuing all of the licenses (Action Alternative) or not taking any action (No Action Alternative). Under the Action Alternative, TVA would relicense for the 1999 through 2003 crop years. The majority (646 acres) would be licensed for hay crop production. The remainder would be licensed for hay/pasture (379 acres), hay with garden space (10 acres), or row crops (4 acres). Under the No Action Alternative, the 72 tracts would not be licensed for agriculture and would likely be allowed to revert to early successional vegetation.

Under the Action Alternative, TVA determined that there would be no effect on cultural resources or endangered and threatened species. There would likely be insignificant water quality impacts and insignificant impacts to aquatic biota due to nonpoint source pollution from pastureland. Existing Agricultural Best Management Practices (BMPs), which are part of the agricultural license agreement, would protect wetlands, water quality, and aquatic life. Under the No Action Alternative, there would be no new impacts to environmental resources. Over time, vegetation growth and natural succession would result in some local improvements to water quality and aquatic ecology. After review of the EA, TVA found that the proposed licensing of 72 tracts for agricultural use would not have a significant impact on the quality of the environment. Because of the beneficial uses of the land, TVA adopted the Action Alternative. The outcome of this EA applies to 355 acres on Norris Reservoir.

*Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley (TVA, 1999a*). In April 1999 TVA completed an EIS on residential shoreline development impacts throughout the Tennessee Valley. Under the Blended Alternative, adopted in the Record of Decision, sensitive natural and cultural resource values of reservoir shorelines are being conserved and retained by: (1) preparing a shoreline categorization for individual reservoirs; (2) encouraging voluntary donations of conservation easements to properties over which TVA holds a flowage easement (i.e., property over which TVA has the right to flood) or other shoreland to protect scenic landscapes; and (3) establishing a policy that no additional residential access rights will be granted across public shorelines unless "maintain and gain" objectives to prevent losses of public shoreline are achieved.

*Davis Creek Management Unit - Norris Reservoir - Resource Management Plan and EA (TVA, 2000).* In January 2000 TVA completed an EA addressing plans to manage the 1,562-acre Davis Creek Management Unit on Norris Reservoir. TVA proposed numerous activities

to manage public use, forest resources, and wildlife resources over the next 25 years. The EA evaluated the potential environmental impacts of three alternatives: Current Management (No Action Alternative or Alternative A), No Management (Alternative B), and Proposed Resource Management Plan (Alternative C). Under any of the three alternatives, the EA found that impacts to ecological communities, sensitive natural resources, cultural resources, water quality, air quality, and visual resources would be insignificant. Alternative C, which includes construction of a loop road and development of reservoir access sites, will result in improvements in the quality of available wildlife habitats, improved forest management, and better access for recreational users. Outdoor recreation activities, including hunting, fishing, bicycling, camping, and wildlife viewing, will be enhanced. Because of these benefits TVA selected Alternative C for implementation.

*Fullerton Bend Management Unit - Norris Reservoir - Resource Management Plan and Environmental Assessment (TVA, 2001).* In January 2001 TVA completed a EA and Finding of No Significant Impact (FONSI) addressing plans to manage the 2,492-acre Fullerton Bend Unit. Just as with Davis Creek Management Unit, TVA proposes numerous activities to manage public use, forest resources, and wildlife resources over the next 25 years. The EA evaluates the potential environmental impacts of three alternatives: Current Management (No Action Alternative or Alternative A), No Management (Alternative B), and Proposed Resource Management Plan (Alternative C). Under any of the three alternatives, the Draft EA found that impacts to ecological communities, sensitive natural resources, cultural resources, water quality, air quality, and visual resources would be insignificant. Alternative C proposes improvements to an existing forest road to improve public access and meeting anticipated public parking needs by constructing small parking areas. These changes will result in improvements in the quality of available wildlife habitats, improved forest management, and better access for recreational users. Outdoor recreation activities, including hunting, fishing, bicycling, camping, and wildlife viewing, will be enhanced under Alternative C. Because of these benefits TVA selected Alternative C for implementation.

*Lone Mountain Shores Corporation Request for Approval of Shoreline Management Plan, community dock and boat ramp for Tract Numbers XNR-836 and XNR-837 (TVA, 2000).* In March 2000 TVA reviewed an independently prepared EA which assessed the impacts of future activities on 161 acres of TVA-public land adjacent to Lone Mountain Shores 2,400-acre project site. The EA found that impacts to public resources from the adoption of the proposed shoreline management plan and approval of the community dock and boat ramp would be insignificant. The resources evaluated included traffic congestion, socioeconomic conditions, recreation, terrestrial and aquatic ecology, air and water quality, public utilities, and floodplains. These resources would be significantly affected on an individual or cumulative basis. TVA choose Alternative 4, as it protects sensitive shoreline resources, provides additional mitigation measure to reduce potential impacts, and allows reasonable access to the water for all potential lot owners.

*Request for Land Sale (Tract Number XNR-907) - Caryville Stone, L.L.C., Norris Reservoir, Campbell, Tennessee (TVA 1999).* In March 1999 TVA completed an EA which evaluated the request to sell a 13.5 acre non-waterfront tract of TVA public land to accommodate the expansion of Caryville Stone's existing rock quarrying operations. TVA determined that the

incremental impacts of the sale of this property and subsequent implementation of development planned by Caryville Stone, L.L.C., when added to past, present, and reasonably foreseeable future actions, would be insignificant. TVA required Caryville Stone, L.L.C., to offset anticipated wetland impacts by mitigating loss of a 1.9-acre wetland.

*Proposed Deed Modification - Norris Crest Partnership, Campbell County, Tennessee (TVA, 1996).* In July 1996 TVA issued an EA and FONSI for the proposed deed modification for Norris Crest Partnership residential subdivision development on Norris Reservoir. In return for removal of deed restrictions and to protect the environment, standards outlined in the Shoreline Management Initiative would apply to vegetation removal and water-use facility construction.

## 1.3 Public Involvement and Issue Identification

In April 1999 an article was published in *TVA River Neighbors* announcing that land use planning was under way on Norris Reservoir. This publication was sent to over 20,000 people inside and outside the Tennessee Valley. Fifteen people responded by calling 1-800-TVA-LAND and asked to be placed on the Norris Reservoir land planning mailing list. This toll free telephone number is still available for anyone to call and request to be added to the mailing list. Mailings were also sent to approximately 3,000 citizens notifying them of the planning process and how to become involved.

From October through November 1999 TVA sought comments from elected officials, county chamber of commerce members, public agency representatives, citizens, recreational users and other stakeholders of Norris Reservoir. Local officials were personally visited, told about the Norris Plan and how to become involved, and were asked to help notify the public about the process. Information packets were also left for the officials to distribute. A series of meetings were held between TVA and other public agencies who have responsibility within the Norris Reservoir watershed. Agency representatives were asked to identify issues that should be addressed in the Norris Plan and to share what information they know about the condition of the watershed (see Section 4.2, List of Agencies and Organizations Consulted). Agencies were also asked to provide information concerning proposed or ongoing activities affecting Norris Reservoir. Input from stakeholders and the general public was sought through news releases to local newspapers announcing public participation opportunities. Individuals were also invited to submit comments by electronic mail.

Citizens were invited to attend two public meetings. The first meeting was held at Anderson County High School on October 28, 1999, and the second was held at Lincoln Memorial University on November 2, 1999. These two meetings had a total of 104 participants who were asked to respond to questions to help define issues associated with Norris Reservoir and the watershed area. The meetings were cosponsored by TVA and the Tennessee Department of Environment and Conservation (TDEC).

Additionally, individuals were invited to complete a questionnaire indicating their preferences and opinions regarding Norris Reservoir (see Appendix A-2) and submit comments about their valued and preferred uses of TVA public land. They were also asked

about the watershed surrounding the reservoir and to identify important issues that need to be addressed over the life of the Norris Plan. Questionnaires were mailed to individuals whose names were compiled from TVA mailing lists and were also distributed during public meetings. A total of 322 questionnaires were returned. The vast majority of respondents (77 percent) indicated a preference for water-related activities and more than half (58 percent) used Norris Reservoir and surrounding TVA public land for wildlife observation. Respondents (72 percent) suggested that the number (or amount) of marinas on Norris Reservoir were about right, while almost half (46 percent) indicated a need for more opportunities for wildlife observation. Seventy-five percent suggested a preference for fewer jet skiers on the lake. Over 50 percent felt that more land was needed for sensitive resources, wildlife management, and other natural resource management areas. Over 50 percent thought that about the right amount of land was already allocated for state park and commercial recreation areas.

Survey respondents also felt that boat waste, trash and litter cleanup, water quality monitoring, and improved recreational access and facilities should be high priority issues, while providing industrial/economic development opportunities should be low. Those surveyed also expressed a relatively strong willingness to get involved and help with such projects as litter clean-up and wildlife food plantings. A slightly less strong willingness was expressed regarding participation in watershed coalitions, erosion control/prevention, or committing to proper disposal of boat waste. About 9 percent indicated an interest in starting a watershed coalition. As a result, two watershed coalitions, Friends of Norris Lake Anderson County and Campbell County Chapters, were formed. These coalitions are working to improve water quality throughout the Norris Watershed by stabilizing streambanks, working with farmers to minimize agricultural impacts, cleaning up litter and dump sites, and providing educational opportunities.

TVA staff also solicited input from representatives of a cross section of groups who used or were concerned with the natural resource conservation issues on Norris Reservoir. Information packets were sent to county chamber of commerce offices with an offer to visit the office as a follow-up. Interested state and federal agencies and resource conservation groups, such as the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Tennessee Wildlife Resources Agency (TWRA), Tennessee Division of Forestry (TDL), Tennessee Conservation League (TCL), Quail Unlimited, National Wild Turkey Federation, and others were asked to participate in the planning process by providing information and input, including concerns about proposed or ongoing activities and land use issues around Norris Reservoir. The responses from these groups are also provided in Appendix A-2.

**Issue Identification –** Internal scoping and general public, public officials, stakeholders, peer agencies, and focus groups were used to identify the following resources/issues that are considered in this EA.

- Aesthetics and Visual Resources
- Cultural Resources
- Historic Resources

- Endangered and Threatened Species
- Terrestrial Ecology
- Wetlands and Riparian Areas
- Recreation
- Water Quality
- Aquatic Ecology
- Socioeconomics

The following issues, also identified in scoping, are not likely to be affected by the proposed alternatives.

- Navigation
- Prime Farmland
- Air Quality
- Noise
- Floodplains

## 1.4 The Decision

The TVA Board of Directors will decide whether to adopt a new Norris Reservoir Land Management Plan (Norris Plan) to guide implementation of future policy or to continue the use of the existing Forecast System for land use.

## 1.5 Necessary Federal Permits or Licenses

No federal permits are required to develop a Plan. Site-specific information on reservoir resources has been characterized in this EA and potential impacts on these resources were considered in making land use allocation recommendations. Appropriate agencies administering laws and other environmental regulations associated with the development of wetlands, taking of endangered species, and effects on historic resources have been consulted during this planning process. When specific actions, such as construction of water use facilities, buildings, roads, or walking trails are proposed that could affect sensitive resources, additional review and appropriate permits or consultations may be required in order to gain approval for the action.